

# The Range Rider



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## OUR NO. 1 PROJECT

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"Win the war!" That's our No. 1 project these days.

Under the guidance of our Director, the Grazing Service on the home front is endeavoring to strip down to the barest essentials to help make the fighting machine on the battle front an unbeatable one.

One of the latest offers on the part of this Service to speed the war is the tendering to military organizations or civilian organizations engaged in war work, approximately half of our trucks, passenger cars, tractors, rotary scrapers and other machines for the duration of the war. While this valuable equipment will serve to "further the war effort," its release by the Grazing Service will mean a reduction of approximately 50 percent in the Service's use of gasoline, oil, and tires. Travel will be reduced to a minimum and some of our construction work will have to wait. The main job of all of us is to win this war—NOW.

Following an announcement of the Interior Department War Program recently, Director Rutledge sponsored the organization of a Western Resources Council composed of representatives of the following Interior Department Bureaus: Bureau of Mines, Geological Survey, General Land Office, Reclamation Service, Indian Service, National Park Service, Bituminous Coal Division, Fish and Wildlife Service, and the Grazing Service.

The purpose of the council is to integrate facts and facilities available to the various bureaus so as to make them immediately available to proper authorities and lead to direct action in the development and mobilization of raw materials and in making these materials available to military and civilian agencies engaged directly in the war effort. The Council, of which Director Rutledge is chairman, will serve as a "clearing house" to turn the resources under the administration of the Department to the immediate needs of the war program.

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DEPARTMENT OF THE INTERIOR

Grazing Service

Office of the Director  
Salt Lake City, Utah

March-April 1942

Vol. 4, Nos 3 & 4

DIRECTOR RUTLEDGE ADDRESSES  
UTAH ASSOCIATION

Director Rutledge was invited to address the Utah Cattle and Horse Growers Association at their annual convention in Salt Lake City on April 4, on the policy of the Grazing Service in the light of the present situation and how this policy affects small owners. We quote below an excerpt from Mr. Rutledge's address:

"Now, just a word concerning how the ranges should be used after the adjudication of grazing privileges has been made. Conditions are so much more different in one region than they are in another, or in one district than they are in another, that the Grazing Service is not wedded to any hard and fast plan for all regions or for all districts within a region. The immutability of the laws of the Medes and Persians has no place in the livestock industry or range administration. We want to make our administration as flexible as possible so that we can keep abreast of changing conditions and make any adjustments required by any or all contributing influences. In those areas where it is possible to make individual allotments, the question of administration is greatly simplified and the type of operations much more flexible. In fact, the allottee can use his range according to most any plan he desires which is recognized as sound by stockmen similarly situated. If we can sum up all the factors involved and come out with an answer which adds up to common sense and good, sound range management, we are completely satisfied. Where, however, it is necessary to make community allotments, the matter is not so simple. The use of one allottee at least to a certain extent has to be coordinated with the use of all other allottees, and the operation of any one allottee or class of allottees is necessarily made less flexible out of respect for the rights of others. Here again the Grazing Service is wedded to no one plan or set of plans. Anything that we can help you work out that will encourage rather than stifle initiative, or that will broaden the field of individual operations and endeavor, may be said to be a Grazing Service objective. So long as we come out with the right answer, common sense, and sound range administration, we are not particularly concerned with the route we travel to get there."

The farm population in 1940 was 30,151,076, a decrease of about 6,000 in 10 years, or a decline in its percentage of the whole population from 24.6 to 22.9.

Keep on buying to "keep 'em flying."

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## WHEAT IS ALSO A GRASS

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By Floyd Larson, Associate Range Examiner, Montana.

I sat down on a rock and pondered. Why did an acre of grass land here at the foot of the Pryor Mountains support so much more grazing than an acre down in the plains along the Yellowstone River? Here I was, only fifteen miles due south of Billings, Montana, and the big grass land pasture on which I had just completed my study showed that by actual records it was carrying three times the load that could be grazed on the grass land north of Billings - and there was no sign of injury from overgrazing!

I carefully re-checked my notes and calculations, asked a few more necessary questions of the obliging stockman whose records had been placed at my disposal, and then took my leave. Like a modern sleuth who had carefully gathered all his clews at the scene of a crime and then retired to his laboratory, I was on my way back to headquarters. The solving of this problem was an indoor job.

My first call was at the county office of the AAA. I had often before noticed close correlations between wheat yields and range-carrying capacities in a given area on a given soil. After all, wheat is just a grass that has been tampered with a bit by man. My first question was, what was the average wheat yield in a certain area out north of Billings? It was about 15 bushels on summer fallow. And how about on this study ranch near the Pryors? The AAA man, a farmer himself, grew enthusiastic. Now, there was one of the best ranches in the county! Long-time average - 24.7 bushels on summer fallow! The wheat yields confirmed the pasture records. We were dealing with high-producing land, whether in crop or in grass.

I returned to my office to run down my next clew - moisture. The moisture-laden winds come principally from the northwest in this part of Montana, and the mountain mass of the Pryors lifted the air currents, cooled them, and caused them to drop some of their moisture. After checking weather bureau records, I reckoned that the study ranch at the foot of the Pryors was receiving at least 2.6 inches more annual moisture than the grass land north of the Yellowstone, - a very significant

amount so far as increased yields are concerned. And my last clew - the soil. It was much more highly productive on the Pryor ranch, - rich, dark loam against light, brown loams to heavy clays on the Yellowstone grassland. The problem was solved.

On a broader basis such as a county, there is not always a close correlation between wheat yields and range-carrying capacities. There is a lower limit of yield at which it ceases to be profitable to cultivate wheat. Crop land yielding below this minimum is simply abandoned and thenceforth is classified again as range. Thus, on areas of low precipitation and poor soils the minimum economic yield is still attained by careful selection of only the most productive land. Broad productivity correlations between range land and wheat land are also upset when the farm land happens to be very good and the range land very poor, such as is the case in certain counties in western Montana. In these cases, the farm land occupies the rich alluvial valleys, while the range land occupies rocky, forested mountains with sparse edible vegetation.

Be that as it may, if counties are chosen where the productivity classes of range and farm land are about the same, e. g. third and fourth grade farm land versus third and fourth grade range land, a correlation in yields will usually be found within the limits previously indicated.

Wheat yields for three counties in central Montana, having a generally poor soil type for farming, were averaged to obtain a normal yield of 6.5 bushels\* for the group. These same counties were found to have an average grazing capacity on range land of 52.7 acres per animal unit. Long time annual precipitation records from weather bureau stations serving this area were likewise averaged to obtain an annual precipitation of 12.5 inches for the group.

Four counties in southeastern Montana having somewhat better soils and with 13.34 inches of annual precipitation showed a normal wheat yield of 7.8 bushels. These same counties required only 42.3 acres of range land per animal unit. In other words, a 20 per cent increase in wheat yield was accompanied by a 25 per cent increase in grazing capacity.

Five counties in northeastern Montana, having still better soils and about the same annual precipitation (13.26 inches) as those in southeastern Montana, were found to give

still higher yields both in wheat yields and grazing capacities, i. e. 8.6 bushels and 32.3 acres respectively. As compared with the second group of counties, the northeastern group showed a 10 per cent gain in wheat yield and a 31 per cent increase in grazing capacity.

Comparisons made of areas in western South Dakota with good grass land in the plains of eastern Montana indicate that while annual precipitation in the former area may be as much as 4 inches greater, the advantage is offset by higher summer temperatures. As a result the grazing capacities are similar and the wheat yields are about the same! After all, wheat is also a grass.

\*Data quoted on county wheat yields and range carrying capacities obtained from 1940 Annual Report for Montana Agriculture Adjustment Administration.

Mr. Larson's article is extremely timely. We read in a recent issue of the Department of Agriculture Clip Sheet that breeding and selecting new cereal varieties for their grass value instead of for grain production is a current activity of that Department. Using Texas as the guinea pig, breeders are working to supply small grains with a "spring-winter" growth habit, that grow vigorously in winter and tiller freely, that recover quickly after grazing; that can stand trampling, that will not joint and seed until late in the season, and that are resistant enough to rust and other foliage diseases so that the livestockman can harvest at least enough grain to reseed the winter pastures. In cooperation with the Texas Agricultural Experiment Station, the Bureau of Plant Industry has released for commercial production two new oat varieties, Ranger and Rustler, and an unnamed giant beardless barley developed for both grain and forage. Several other wheat, oat, and barley varieties under test are reported to be showing good resistance to disease and may prove worth while for grain as well as for forage.

COWS HAVE HORSE SENSE, says W. H. Alison, farm adviser in Merced County, California. To prove his point he refers to the walk-through milking barn where several cows are in the barn at one time—the rest out in a corral. When one cow is milked she is turned out to pasture and the milker opens the door to the corral and calls out the name or number of the next cow to be milked. If he calls for "Daisy" you'll see her start nosing her way through the crowd and in a few moments she is being milked. Every cow in the herd responds to her name.

RUBBER ON THE RANGE? PERHAPS!

Rubber for tank treads, for bomber tires, for hundreds of other wartime uses. The need for rubber increases with the war that itself has cut off our principal rubber supply.

To meet this situation the country looked within itself. Several plans were proposed. The cultivation of guayule was one. But guayule plants need time to grow. The rubber shortage is imminent. It is here.

Director Rutledge asked his staff these questions: "Are there other sources of plant rubber that are being overlooked? How about rabbit brush?"

Well, big rabbit brush (*Chrysothamnus nauseosus*) is a range pest as all range and stockmen know. It has practically no value as livestock forage—even the rabbits don't like it! In areas where it is dense, the carrying capacity of the range is practically nothing. Why not harvest the *Chrysothamnus* (it would be a once-only crop) and reseed those areas to good range forage crops, thus accomplishing the dual objective of obtaining an immediate supply of rubber and produce better ranges for more and better livestock.

It was on this basis that a survey was planned in grazing districts. Tiny Greenslet was named chairman of a "Chrysothamnus Committee." He reports that in grazing districts of 6 of the 10 "public land" States there is an estimated amount of 3,743,000 acres or 4,143,400 tons of big rabbit brush. Since the average rubber content is 2.83 percent, the total rubber yield would be something like 118,000 tons of rubber—chrysil rubber, it is called. This does not include areas outside of grazing districts.

Oregon and New Mexico rank as first and second in the amount of rabbit brush available; Nevada is third; and Utah, fourth. Utah's available yield is 4.6 tons per acre but only 89,000 acres are found in grazing districts of the State.

A project for the removal of rabbit brush from the range would be highly desirable from the stockman's point of view. "Removal of this type of practically worthless brush in grazing districts followed by reseeding with good forage types would provide an estimated additional 200,000 animal unit months of feed each year," Director Rutledge points out. Translated that means 500,000 pounds of meat annually to feed Uncle Sam's armed forces. The Grazing Service stands ready to help in such a program if and when processing plants can be established.

No special machinery would be required to harvest *Chrysothamnus*—just a single- or two-bottom plow, a road ripper or a bulldozer to tear the stuff up by the roots.

The real problem is conversion from shrub to rubber. From present indications this will involve new discoveries, mainly in the chemical field. Possibilities are now being explored.

Maybe some day you and I will be heading toward a "rabbit brush factory" with the makings of all manner of things from a pencil eraser to truck tires!

HERE AND THERE

CCC enrollees assigned to Grazing Service camps are accustomed to doing fence construction work. This is one of the principal types of range-improvement work they have been doing for the past 7 or 8 years. But that was peace time. Last week we received a letter from an organization in New Mexico. It congratulated one of the Grazing Service enrollee construction crews for a fine job and skillful application to a fence project—a fence that surrounds an alien internment camp!

"Old Bossie" may sometime provide a new Easter outfit for milady. We read that fabrics suitable for coats, dresses, and hats are already being made out of skim milk. Wool is an animal protein substance. So is casein, a protein found in milk. A process has been perfected for spinning the casein into an artificial fiber much like wool and fur. I wouldn't mind wearing a "skim milk" coat for the duration, and reserve the genuine product for the fellows that are doing the fighting, would you?

"Maybe we can't fly the planes but from our place on the ground we can help out when they are forced down or crash on the range," say Oregon stockmen. In fact, so sincere are these men in their desire to help in ANY way they can that a resolution was adopted at a recent meeting. The resolution, which was forwarded to the Office of the Director, reads: ". . . Be it resolved, that the advisory board of the Baker Grazing District, Oregon, go on record that we pledge ourselves to assist in the necessary relief and salvage operations incident to forced landings and crashes of military planes in this district with whatever means and facilities we may individually and severally have at hand."

In the New Mexico news letter we read about a student who used a stop watch to observe a small herd of beef cattle through a 24-hour period. The student learned that a cow grazes about 8 hours, spends some 12 hours lying down and loafing the remaining 4 hours. He also noted that the average grazing speed is from 50 to 70 bites per minute, with the top speed 90 bites per minute!

Two Executive Orders signed recently represent the first action of their kind exercised under the Taylor Grazing Act. By these orders jurisdiction of nearly 40,000 acres of land was exchanged between the Grazing Service and the Forest Service. The action modified the boundaries of the Basin Grazing District and the Fremont National Forest in Oregon. Over 15,000 acres of grass and sagebrush land were withdrawn from the forest and placed within the grazing district for administration under the Taylor Act. Nearly 21,000 acres of timber lands, mostly privately owned, formerly within the boundaries of the grazing district were added to the national forest. This action was possible under Section 13 of the Act

which specifically provides for the exchange of lands in forests and grazing districts when such action is deemed advisable for better administration. The exchange, sponsored by the Lake County Planning Board, is the result of cooperation and study by local stockmen and officials of the two Federal agencies over a period of several years. It places timbered areas in the vicinity within the forest and lands chiefly valuable for grazing within the grazing district—where they belong!

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L. A. Jones, Idaho stockman and member of the advisory board of the Wood River Grazing District is personally paying bounties for magpies in an effort to control these pests which prey on livestock and game.

The advisory board has offered to contribute from the 50 percent fund toward an allotment for magpie bounties, providing some local game association will match that sum.

Magpies irritate stock, especially cattle, by picking sores in their backs and eyes. Also, they prey on game-bird nests. It is said their fondness for the eyes of newly born lambs is the reason for many blind sheep.

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From "Alexander Bell's Sheep", TIME, February 9:

"The most remarkable sheep since the time of Jason the Argonaut nibbled, stared, bleated last week in a new home at Middlebury, Vt., where they are now beginning the third chapter of their careers, in the care of the Bureau of Animal Industry. Though they do not have golden fleece, they may be almost as valuable to farmers, wool-wearers, and mutton-eaters. Their unique characteristics —

1. They bring forth twins in four out of five births, which is two to eight times as often as twinning among ordinary flocks.
2. They produce enough milk through enough functional nipples—four or more—to feed their twins.

"Idea of making two sheep grow where only one grew before first occurred in Inventor Alexander Graham Bell, who spent the last 30 years of his life and some \$250,000 on the project. At Bell's death in 1922, his son-in-law, Plant Explorer David Fairchild, turned the flock over to Professor Ernest Ritzman of the University of New Hampshire, an expert breeder. At last year's end, his work was finished, and his retirement neared; so he turned the flock over to Federal stockbreeders at Middlebury. There Geneticist Ralph Philips will breed the animals toward genetic stability, so that their characteristics will persist when they are released to U. S. farmers, who now tend some 50,000,000 sheep."

From the Lemhi Grazing District, Idaho, comes the report that in the 18-month period ending January 1, 1942, 1600 coyotes were taken by trappers in that grazing district under the direction of the Fish and Wildlife Service. Also taken were 91 bobcats, 20 bears, and one mountain lion. Twenty-seven dens were destroyed. Contributions from the 50 percent grazing fee fund toward this predatory animal control work amounted to over \$1300—a comparative small figure in face of livestock lost as prey to these predators.

Between January 28 and February 1, the Albuquerque drafting office worked on a 24-hour basis, turning out drafting work for the U. S. Army Engineers in Albuquerque. During the first 42 hours the boys got out 8,750 prints. Between February 1 and 20, two 8-hour shifts kept up with the extra work load but again on February 20 the boys went back to a 24-hour day and worked through to February 25 on that basis when the Engineers Office received their own reproduction machinery. During the month following January 28, the Albuquerque boys completed 3,232 square feet of photostat prints; 2,094 square feet of miscellaneous prints; 208,800 square feet of blackline prints; and made over 200 maps for the Army. Their work didn't go unnoticed. Head Blueprint Operator for the Engineers, Mr. Hendricks, watched the boys at work. He requested that two of them—Douglas Caldwell and Joe McMurray—get discharges from the CCC and work in his reproduction plant. Two other enrollees—Birl Duty and Rudolfe Clarks—had taken Civil Service examinations. They joined the U. S. Engineers as Junior Engineering Draftsmen on February 23. A call from the Engineering Office for a typist also resulted in the employment of another member of the drafting crew—Tomas Montoya. That sounds like a splendid showing to us.

The WPB reports that more than half a million burlap bags—one-third of the number needed for handling the new domestic wool clip—have been returned to wool growers by mills during the past month. Commending the "prompt cooperation" of the mills, Chief Rosenwald of the Bureau of Industrial Conservation urged all handlers of wool to return emptied bags as soon as possible for reuse. (From Information Digest)

Because burlap will probably be even scarcer next year, it has been suggested that when the grower sells his wool he sell it with the understanding that his wool bags are to be returned by the purchaser.

"Roughly speaking there are about 16 billion acres of land on the earth lying in a climate favorable for crop production, or about 8 acres for each inhabitant. The welfare of future generations and their standard of living depends upon our ability to properly use this land area."

—H. L. Shantz.

For every three sheep grazing on our ranges, two soldiers can be supplied with uniforms. Annual wool requirements for each soldier in war time are equal to the average wool consumption of 40 civilians. Also the regular soldier gets about three times as much meat as the average civilian consumer. This means approximately 450 pounds of meat a year for each soldier.

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One Utahn, Dewitt J. Paul, has suggested that city folks spend their vacation "down on the farm," helping with the crops. It's an idea worth thinking about. Spending a vacation on the farm would provide the benefits of outdoor life, good food, recreation, and plenty of exercise. The money saved would buy quite a few defense stamps!

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Do you know -

That, with cooperation of farmers and stockmen, enough scrap metal could be found on farms to make

- more than twice as many battleships as there are in the world today;
- enough 2000-pound bombs to drop three per minute from flying fortress bombers incessantly for over 3 years;
- enough 100-pound bombs to drop one every second of every minute of every hour of every day for over three years!

It has been stated that 50 percent of the steel used could be from scrap.

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Last month Bernie Ysursa of Boise gave his annual party in honor of the Grazing Service and district advisers. The party "idea" had its origin in 1936 when the Owyhee Grazing District was first created. Since, it has become an established fiesta for Grazing Service employees, advisory board members, and stockmen throughout southwestern Idaho.

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All Grazing Service employees are cautioned against giving out information relating to the location and extent of important facilities in map or other form when it may unintentionally reach enemy hands. Requests for such information should be refused except in cases where it is certain that the recipient has the proper authority to receive it.

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Amendment to Section 2 (1) of the Federal Range Code:

(1) Prior water is water which was used to service certain public-land range for a given number of livestock during the 5-year period immediately preceding June 28, 1934, provided, that no water shall be considered as prior unless offered as base property in an application for a grazing license or permit filed within one year after the public lands which were used in creating the priority become a part of a grazing district, and further provided, that in cases wherein such lands become a part of a grazing district prior to March 16, 1941, a water shall not be considered as prior unless offered in an application prior to March 16, 1942. It will be considered prior water only to the extent of the greatest number of livestock that was properly grazed from it for a substantial period of time during the 5-year period immediately preceding June 28, 1934.

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On the occasion of the ninth anniversary of the Civilian Conservation Corps last month, Director McEntee expressed his keen appreciation to all CCC personnel for the outstanding contribution the Corps has made and is making to the war effort. In observance of the occasion, open house exercises were held at those camps where such exercises did not interfere with the work program, and Mr. and Mrs. America were invited to see what the Corps had done.

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Members of the Bonneville Grazing District, in Salt Lake City for a board meeting on February 23, were guests of Radio Station K.D.Y.L. where a transcript was made of their "round table" discussion which was broadcast later on an early-morning "farm" hour.

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Secretary of the Interior Ickes says, "We still use too much the word 'defense.' Substitute 'war' for it whenever possible."

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We can

We must

We will

Buy United States Defense Bonds and Stamps NOW!

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"Named as the best slogan of the year: "The more sweat, the less blood and tears!"

SAFETY HONOR ROLL FOR FEBRUARY

G-128	MASON VALLEY	Yerington, Nevada	29 MONTHS	Accident-free!
G-137	SOLOMONVILLE	Safford, Arizona	29 MONTHS	Accident-free!
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G-148	Carlsbad	Carlsbad, New Mexico	18 months	
G-108	Hubbard Ranch	Wells, Nevada	17 months	
G-127	Whitehall	Whitehall, Montana	15 months	
G-134	Shoshoni	Shoshoni, Wyoming	14 months	
G-150	Columbus	Columbus, New Mexico	13 months	
G-157	Dry Valley	Emery, Utah	12 months	
G-21	Indian Springs	Ely, Nevada	12 months	
G-178	Las Cruces	Las Cruces, New Mex.	12 months	
G-77	Rawlins	Rawlins, Wyoming	12 months	
G-144	Woodriver	Shoshone, Idaho	11 months	
G-69	Prather Well	Oro Grande, New Mex.	11 months	

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CERTIFICATES OF PROFICIENCY

Jacques E. Noble, G-141, Idaho, for proficiency as clerk and machine operator.

Oscar Schaible, G-73, Montana, for proficiency as tractor operator

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ABOUT YOU AND ME

Special courses in preparation for emergency work are taking up much of the spare time of both men and girls in the Director's office and the regional office here in Salt Lake. Vi Voelkner seems to be our star student, having completed both standard and advanced Red Cross First Aid and courses in Food Nutrition and Canteen work. She is now deeply engrossed in studying for Civil Air Patrol. Meta Spiess of the regional office has completed courses in Home Nursing and Standard First Aid. Amy Hamilton, Florence Lein, and Irma Smoot have all taken the Nutrition and Canteen Courses and 16 others have completed the Standard First Aid work. Bert Hanna, Johnny's pretty wife, received her diploma in Nurses Aid training recently. And that's just the beginning!

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Carter Maxwell, the guiding light of the Albuquerque Drafting Office since the Grazing Service was a youngster, has been appointed a Supervising Engineering Draftsman with headquarters in Salt Lake City. The Maxwell family, including little Martha, is a welcome addition to the Salt Lake City "Grazing family."

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Devoting their spare time at noon to knitting for the Red Cross, girls in the Director's Office are well on the way toward completing their first afghan. Their slogan is "Remember Pearl Harbor, purl harder!"

Our bowling tournament ended April 3 and the season will be properly "polished off" on April 11 with a dinner-dance at the Newhouse Hotel. The tournament was a great success and the bowlers were enthusiastic about it to the last.

To our honor list of men in the fighting forces we add:

William W. Peak,	Region 4, Oregon
Orville B. Cary,	" 4, Oregon
David K. Hibbert	" 4, Oregon
Chas. H. Wing,	" 6, Montana
Alden E. Spooner,	" 8, Colorado
James C. West,	" 8, Colorado
Milton L. Zaring,	" 10, Wyoming

Serious-minded Stanley, the young enrollee who was detailed as a messenger for the Director's Office, has "graduated" to a nice job with a local merchandising firm.

With three regions participating 100 percent in the Defense Bond and Stamp Campaign during February and all regions averaging 95 percent participation, the total purchases to date were brought up to \$85,575. Total purchases for February were \$17,286 although the pledge for that month was only \$6,592. The Arizona region more than five times exceeded its February pledge during that month, with Idaho and Colorado coming along very close behind.

Let's not be like the farmers dog on a cockle-bur--he just sits and howls!

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The Range Rider is published by authority of the Secretary of the Interior as administrative information concerning important happenings, accomplishments, and aims of the Grazing Service for the information of the personnel of this Service. Not for publication.